

1	GCC TCT ACC CTC AAG TCT GGT TCT AAG GAA GTT GAG AAT CTC AAG AAG CCT TTC	54
1	A S T L K S G S K E V E N L K K P F	18
55	ATG CCT CCT CGG GAG GTA CAT GTT CAG GTT ACC CAT TCT ATG CCA CCC CAA AAG	108
19	M P P R E V H V Q V T H S M P P Q K	36
109	ATT GAG ATC TTT AAA TCC CTA GAC AAT TGG GCT GAG GAG AAC ATT CTG GTT CAT	162
37	I E I F K S L D N W A E E N I L V H	54
163	CTG AAG CCA GTT GAG AAA TGT TGG CAA CCG CAG GAT TTT TTG CCA GAT CCC GCC	216
55	L K P V E K C W Q P Q D F L P D P A	72
217	TCT GAT GGA TTT GAT GAG CAA GTC AGG GAA CTC AGG GAG AGA GCA AAG GAG ATT	270
73	S D G F D E Q V R E L R E R A K E I	90
271	CCT GAT GAT TAT TTT GTT GTT TTG GTT GGA GAC ATG ATA ACG GAA GAA GCC CTT	324
91	P D D Y F V V L V G D M I T E E A L	108
325	CCC ACT TAT CAA ACA ATG CTG AAT ACC TTG GAT GGA GTT CCG GAT GAA ACA GGT	378
109	P T Y Q T M L N T L D G V R D E T G	126
379	GCA AGT CCG ACG TCT TGG GCA ATT TGG ACA AGG GCA TGG ACT GCG GAA GAG AAT	432
127	A S P T S W A I W T R A W T A E E N	144
433	AGA CAT GGT GAC CTC CTC AAT AAG TAT CTC TAC CTA TCT GGA CGA GTG GAC ATG	486
145	R H G D L L N K Y L Y L S G R V D M	162
487	AGG CAA ATT GAG AAG ACA ATT CAA TAT TTG ATT GGT TCA GGA ATG GAT CCG CGG	540
163	R Q I E K T I Q Y L I G S G M D P R	180
541	ACA GAA AAC AGT CCA TAC CTT GGG TTC ATC TAT ACA TCA TTC CAG GAA AGG GCA	594
181	T E N S P Y L G F I Y T S F Q E R A	198
595	ACC TTC ATT TCT CAT GGG AAC ACT GCC CGA CAA GCC AAA GAG CAT GGA GAC ATA	648
199	T F I S H G N T A R Q A K E H G D I	216
649	AAG TTG GCT CAA ATA TGT GGT ACA ATT GCT GCA GAT GAG AAG CGC CAT GAG ACA	702
217	K L A Q I C G T I A A D E K R H E T	234
703	GCC TAC ACA AAG ATA GTG GAA AAA CTC TTT GAG ATT GAT CCT GAT GGT ACC GTT	756
235	A Y T K I V E K L F E I D P D G T V	252
757	TTG GCT TTT GCT GAT ATG ATG AGA AAG AAA ATT TCT ATG CCT GCA CAC TTG ATG	810
253	L A F A D M M R K K I S M P A H L M	270
811	TAT GAT GGC CGA GAT GAT AAT CTT TTT GAC CAC TTT TCA GCT GTT GCG CAG CGT	864
271	Y D G R D D N L F D H F S A V A Q R	288
865	CTT GGA GTC TAC ACA GCA AAG GAT TAT GCA GAT ATA TTG GAG TTC TTG GTG GGC	918
289	L G V Y T A K D Y A D I L E F L V G	306
919	AGA TGG AAG GTG GAT AAA CTA ACG GGC CTT TCA GCT GAG GGA CAA AAG GCT CAG	972
307	R W K V D K L T G L S A E G Q K A Q	324
973	GAC TAT GTT TGT CGG TTA CCT CCA AGA ATT AGA AGG CTG GAA GAG AGA GCT CAA	1026
325	D Y V F R L P R I R R L E E R A Q	342
1027	GGA AGG GCA AAG GAA GCA CCC ACC ATG CCT TTC AGC TGG ATT TTC GAT AGG CAA	1080
343	G R A K E A P T M P F S W I F D R Q	360
1081	GTG AAG CTG TAG	1092
361	V K L	

FIG. 1

117 full positional randomization

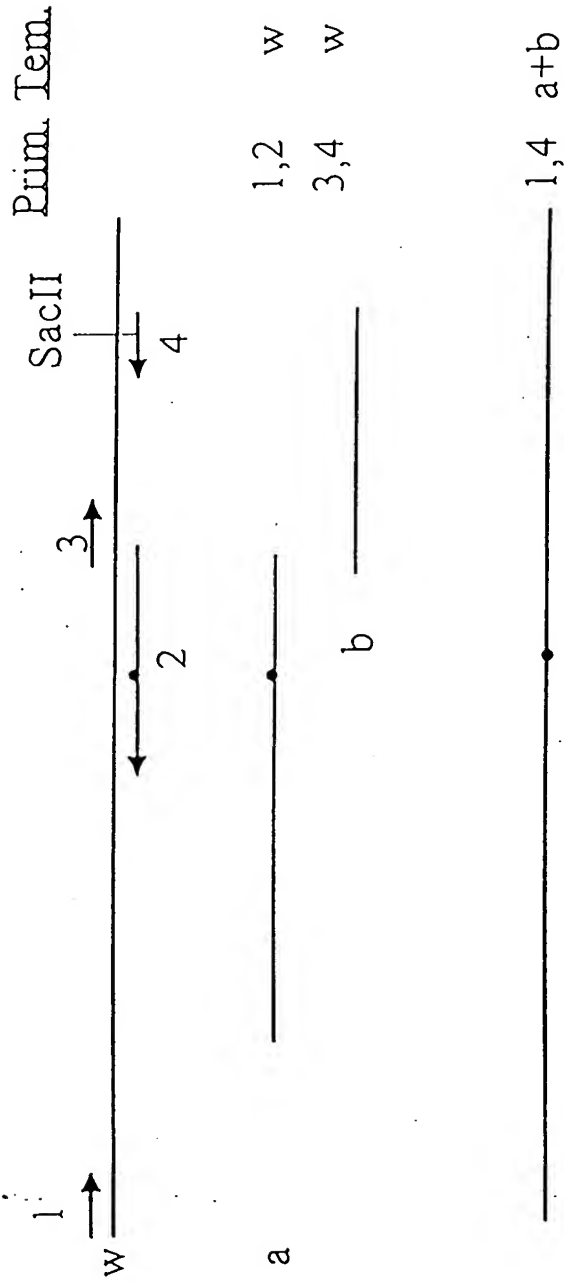


FIG. 2

w is wt sequence
a, and b are fragments
• is NNK codon

Making a combinatorial library with full positional randomization

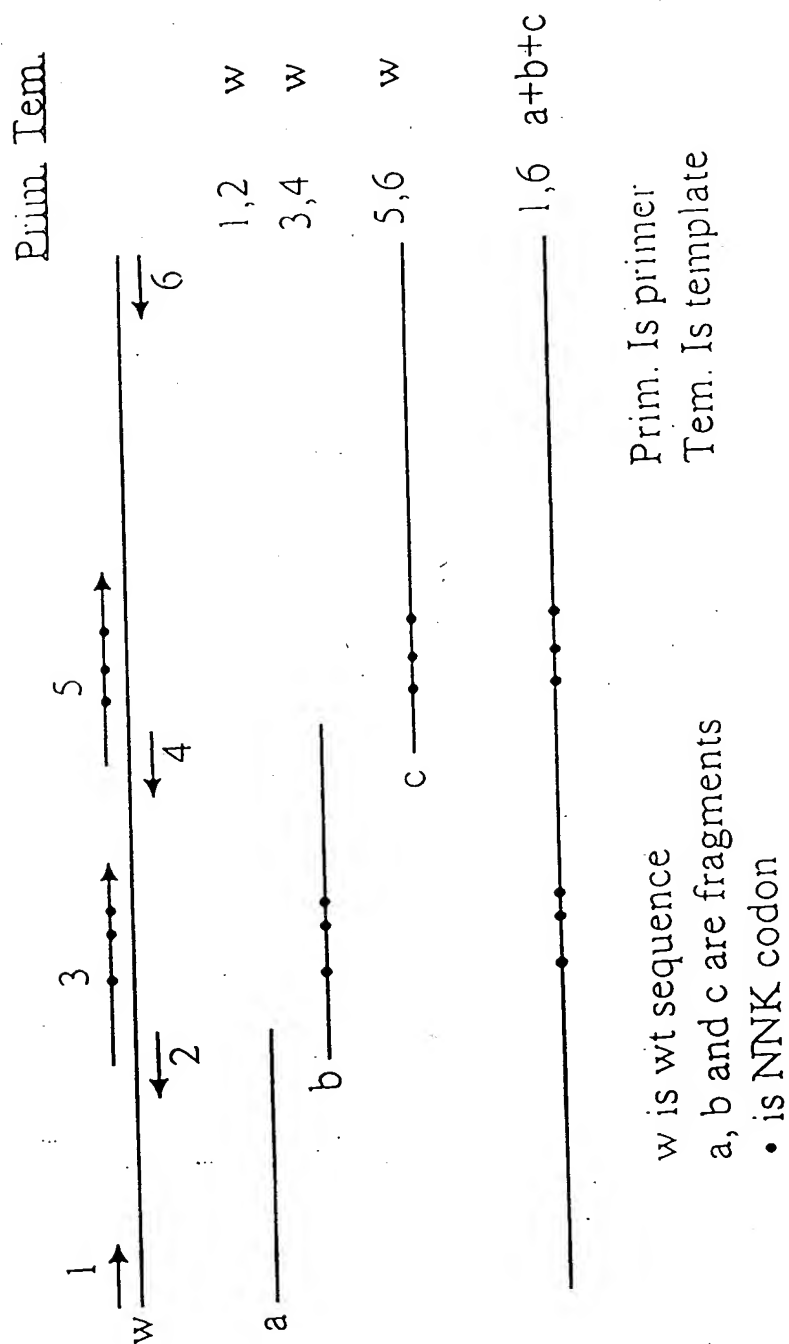


FIG. 3